

Title: Three decades of Magnetars

Authors: C. Kouveliotou on behalf of a large Magnetar Team

Abstract: Magnetars are magnetically powered rotating neutron stars with extreme magnetic fields (over 10^{14} Gauss). They were discovered in the X- and gamma-rays where they predominantly emit their radiation. Very few sources (roughly 24) have been found since their discovery in 1987. NASA's Fermi Gamma-ray Space Telescope was launched June 11, 2009; since then the Fermi Gamma-ray Burst Monitor (GBM) recorded emission from several magnetar sources. In total, six new sources were discovered between 2008 and 2011, with a synergy between Swift, RXTE, Fermi and the Interplanetary Network (IPN). In my talk I will give a short history of magnetars and describe how this, once relatively esoteric field, has emerged as a link between several astrophysical areas including Gamma-Ray Bursts. Finally, I will describe the exciting new results of Fermi and Chandra in this field and the current status of our knowledge of the magnetar population properties and magnetic fields.